

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN HLAVA, SCOTT D. MASTIE and
ARTHUR R. ROBERTS

Appeal No. 1997-2058
Application No. 08/122,828

ON BRIEF

Before THOMAS, KRASS, and DIXON, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-20,
which are all of the claims pending in this application.

We AFFIRM-IN-PART.

BACKGROUND

The appellants' invention relates to a task management for data accesses to multiple logical partitions on physical disk drives in computer systems. The methodology involves concurrently executing threads/tasks in accordance with each of the physical disk task lists to execute all data access tasks in each partition and access the partitions sequentially until the data access program is completed. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A method of optimizing data access in a computer system wherein said computer system includes multiple physical disks with each physical disk having an access controller, at least one of the physical disks includes a plurality of logical partitions, and a data access program for performing data access tasks on a master task list, each data access task identifying a partition on which the access task operates, said program having a plurality of program threads for concurrently accessing data located in multiple partitions, said method comprising the steps of:

mapping according to physical disks the logical partitions identified by data access tasks to be performed by the data access program;

dividing out data access tasks on the master task list by partition and physical disk into a task list for each physical disk according to the partition identified by each data access task;

initiating a thread to operate on each physical disk to be accessed as a part of the data access program; and

concurrently executing said threads in accordance with each of the physical disk task lists to execute all data access tasks in each partition and access the partitions sequentially until said data access program is completed.

Appeal No. 1997-2058
Application No. 08/122,828

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Miro	5,220,653	Jun. 15, 1993
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Howarth, "A Review of Disk Scheduling Policies," The Australian Computer Journal, Vol. 14, No. 4, pp. 150-154, (November 1982).

Claims 1-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Miro in view of Howarth. Claim 18 stands rejected under 35 U.S.C. § 112, paragraph two as failing to particularly point out and distinctly claim the invention.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 14, mailed Dec. 30, 1996) for the examiner's reasoning in support of the rejections, and to the appellants' brief (Paper No. 13, filed Oct. 10, 1996) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

35 U.S.C. § 112, PARAGRAPH 2

The examiner rejects the term “the queue” as lacking proper antecedent basis in claim 18 and appellants maintain that there is proper antecedent basis in the claim. Appellants argue that the antecedent basis for the term is “the physical disk task list.” (See brief at page 32.) While the defect in the claim is not a fatal flaw to understanding the metes and bounds of the claimed invention once explained by appellants, in essence, appellants admit that the claim lacks particularity in the use of the term “the queue.” Therefore, we agree with the examiner and will sustain the rejection of claim 18.¹

35 U.S.C. § 103

At the outset, we note that we are in general agreement with appellants (brief at pages 18-22) that the claims on appeal would not have been obvious to one of ordinary skill in the art at the time the invention was made in light of the teachings of Miro and Howath. Appellants argue that the prior art references applied against the claims have not recognized the problem of thrashing where multiple threads, for each disk drive, are operated concurrently in a multi-partitioned drive. (See brief at page 18.) We agree with appellants. Appellants argue that the examiner has made a conclusionary statement of obviousness to “extend this policy [of shortest-serve-time-first] to multiple partitioned drives” and that all accesses to that partition would be scheduled first then accesses to other

¹ We note that appellants have offered to modify the term to clearly reference the “physical disk task list” which would have obviated the rejection, if previously submitted by amendment after final rejection.

partitions. (See brief at page 19.) We agree with appellants that the examiner's statement of obviousness is merely a conclusion without support from a teaching in the prior art references applied or by an express line of reasoning set forth by the examiner.

Obviousness is tested by "what the combined teachings of the references would have suggested to those of ordinary skill in the art." **In re Keller**, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." **ACS Hosp. Sys., Inc. v. Montefiore Hosp.**, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). And "teachings of references can be combined *only* if there is some suggestion or incentive to do so." **Id.** Here, the prior art contains none. In fact, the advantages of utilizing concurrent operation with multitasking and forcing execution of all data access tasks in each partition with the partitions being accessed sequentially until the tasks are completed are not appreciated by the prior art applied by the examiner. In our view, the examiner's analysis of the claimed invention, and the application of the prior art applied against the claimed invention lacks an analytical linkage to modify scheduling policy of Howath, as advanced by the examiner, and be implemented in combination with the system of Miro.

Instead, the examiner relied on hindsight in reaching his obviousness determination. However, our reviewing court has said, "[t]o imbue one of ordinary skill in

the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."

W. L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13

(Fed. Cir. 1983), **cert. denied**, 469 U.S. 851 (1984). It is essential that :

the decisionmaker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made . . . to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art. **W.L. Gore**, 721 F.2d at 1553, 220 USPQ at 313.

Since the limitation concerning concurrent operation with multitasking is not taught or suggested by the applied prior art, we will not sustain the 35 U.S.C. § 103 rejection of independent claims 1, 11 and 13, and of dependent claims 2-10, 12 and 14-20.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

CONCLUSION

To summarize, the decision of the examiner to reject claim 18 under 35 U.S.C. § 112, paragraph two is affirmed and the decision of the examiner to reject claims 1-20 under 35 U.S.C. § 103 is reversed.

Appeal No. 1997-2058
Application No. 08/122,828

AFFIRMED-IN-PART

JAMES D. THOMAS
Administrative Patent Judge

ERROL A. KRASS
Administrative Patent Judge

JOSEPH L. DIXON
Administrative Patent Judge

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